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Claims 1-20 are cancelled.

21.        A method of operating a telecommunications
network in which the telecommunications network includes
plural distinct nodes interconnected by plural distinct
spans, each node having a digital cross-connect switch for
5    making and breaking connections between links in adjacent
spans forming span paths through the node, the method
comprising the steps of:
        (a1) selecting an originating node;
        (a2) initiating an automatic search from the
10   originating node to identify a set of successive
intermediate nodes that, together with the originating
node, may form a closed path having at least one spare link
between each pair of adjacent nodes in the closed path; and
        b) forming a cross-connection at each node in the
15   closed path to connect spare links in each of the adjacent
spans lying in the closed path and thus form a span path
through each node in the closed path;


22.        The method of claim 21 in which searching for a
20   set of intermediate nodes that may form a closed path
comprises:
        broadcasting statelets from successive nodes in
the network along successive spans having at least one
spare link in each span at least until a first statelet is
25   broadcast to the originating node, in which the successive
nodes are not capable of forming a closed path that does
not include the originating node and each statelet is
prevented from being broadcast along the span on which the
statelet arrived at the intermediate node.
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23.        The method of claim 22 in which broadcasting
statelets comprises:
        initiating a broadcast from an originating node
by broadcasting an originating statelet; and

receiving incoming statelets at intermediate nodes, and broadcasting at least one statelet received by each intermediate node to one or more nodes adjacent to the intermediate node and connected to the intermediate node by at least one spare link.

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24.     The method of claim 23 in which only one statelet derived from the same originating statelet is broadcast, at any intermediate node, on any one span.

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25.     The method of claim 24 in which each statelet is broadcast to the maximum extent possible at each successive node.

.5   26.     The method of claim 24 in which a statelet broadcast through the network is modified at each intermediate node to update a route field in the statelet that records the successive nodes by which the statelet has been broadcast.

!0

27.     The method of claim 26 in which incoming statelets at an intermediate node are broadcast preferentially according to an ordering of the incoming statelets.

!5

28.     The method of claim 26 in which a statelet broadcast through the network is modified at each intermediate node to update a numPaths field in the statelet that records the number of paths available for
!0   restoration of telecommunications traffic along the successive nodes by which the statelet has been broadcast.

29.     The method of claim 28 in which a statelet broadcast through the network is modified at each

intermediate node to update a hop count field in the statelet that records the number of spans traversed by the statelet.

5    30.     The method of claim 29 in which incoming statelets at an intermediate node are broadcast preferentially according to an ordering of the incoming statelets based upon relative values of the numPaths and hop count fields of the incoming statelets.

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31.     The method of claim 26 in which a closed path is formed by making cross-connections between successive spans in one of several routes followed by incoming statelets received by an originating node.

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32.      The method of claim 31 in which the one of several routes is selected according to an ordering of fields in the incoming statelets.

33.      The method of claim 32 in which the ordering is based upon a relationship between the number of paths available for restoration of telecommunications traffic along the successive nodes by which each incoming statelet has been broadcast and the number of spans traversed by the respective incoming statelets.

34.      The method of claim 32 in which routes followed by incoming statelets are evaluated for a pre-determined period.

35.      The method of claim 24 in which a closed path is formed by making cross-connections between successive spans in one of several routes followed by incoming statelets received by an originating node.

36.          The method of claim 35 in which the one of
several routes is selected according to an ordering of
fields in the incoming statelets.

37.          The method of claim 36 in which the ordering is
based upon a relationship between the number of paths
available for restoration of telecommunications traffic
along the successive nodes by which each incoming statelet
has been broadcast and the number of spans traversed by the
respective incoming statelets.

38.          The method of claim 36 in which routes followed
by incoming statelets are evaluated for a pre-determined
period.

39.          The method of claim 21 further comprising
repeating steps a1, a2 and b for each of several
originating nodes in the network.

40.          The method of claim 21 further comprising
periodically repeating steps a2 and b at a node.

41.          The method of claim 40 in which the network has
a configuration of working links, and repetition of steps
a2 and b at a node is carried out after a change of the
configuration of working links in the network.

42.          The method of claim 41 in which the repetition of
steps a2 and b at a node is carried out for each of several
nodes in the network.

43.          The method of claim 22 further comprising
periodically repeating steps a2 and b at a node.

44.     The method of claim 43 in which the network has a configuration of working links, and repetition of steps a2 and b at a node is carried out after a change of the configuration of working links in the network.

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45.     The method of claim 44 in which the repetition of steps a2 and b at a node is carried out for each of several nodes in the network.

Claims 46-52 are cancelled